

Title (en)
Electric steering apparatus

Title (de)
Elektrische Servolenkung

Title (fr)
Direction assistée électrique

Publication
EP 1106474 A3 20030108 (EN)

Application
EP 00125398 A 20001204

Priority
JP 34816599 A 19991207

Abstract (en)
[origin: EP1106474A2] An electric steering apparatus designed to eliminate backlash by enabling a hypoid pinion 7, which operates with rotation of a steering assisting motor, to swing with a bearing as a fulcrum and deflecting the hypoid pinion 7 in a radial direction by an elastic member 16. With this electric steering apparatus, it is possible to satisfactorily eliminate backlash without being affected by dimensional errors of parts such as gears used for assisting steering and to automatically eliminate backlash if it is caused by an increase of abrasion of teeth of the gears. <IMAGE>

IPC 1-7
B62D 5/04

IPC 8 full level
B62D 5/04 (2006.01); **F16C 27/04** (2006.01); **F16H 1/14** (2006.01); **F16H 57/12** (2006.01)

CPC (source: EP US)
B62D 5/0409 (2013.01 - EP US); **F16C 27/04** (2013.01 - EP US); **F16H 57/12** (2013.01 - EP US); **F16C 2326/24** (2013.01 - EP US)

Citation (search report)

- [XY] WO 9911502 A1 19990311 - LUCAS IND PLC [GB], et al
- [Y] EP 0915004 A2 19990512 - KOYO SEIKO CO [JP]
- [A] GB 2228461 A 19900829 - JIDOSHA KIKI CO [JP]
- [A] US 5165495 A 19921124 - FUJII TADAAKI [JP]
- [A] US 5002404 A 19910326 - ZERNICKEL ALEXANDER [DE], et al

Cited by
DE102007023456A1; DE102008056024A1; GB2366551B; EP1623908A4; KR20200057772A; CN111279090A; WO2006051034A1; US7284635B2; US7575090B2; US11499591B2; US11859670B2; WO2019063752A3

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
EP 1106474 A2 20010613; EP 1106474 A3 20030108; EP 1106474 B1 20060705; DE 60029183 D1 20060817; DE 60029183 T2 20070705; JP 2001163229 A 20010619; JP 3891747 B2 20070314; US 2001002630 A1 20010607; US 6561306 B2 20030513

DOCDB simple family (application)
EP 00125398 A 20001204; DE 60029183 T 20001204; JP 34816599 A 19991207; US 72998800 A 20001206